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ABSTRACT

This study focuses on the question of whether the public library can or will be one of the non-formal providers of lifelong learning in Minnesota, and uses the Delphi method to discover in what way the public library as it is perceived by various publics could become an active participant in this dimension of the educational process. Five groups are identified as having potential impact on the lifelong learning component of public library futures: information systems specialists, adult educators, representatives of funding sources, library users, and library practitioners. Members of these groups responded to questions concerned with social and economic change, work and leisure, technological advances, the information-based society, education, and government funding. Conclusions and recommendations for both practical applications of study findings and for future studies are listed. (FM)

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Excerpts From

REFLECTIONS OF TOMORROW:

LIFELONG LEARNING AND THE PUBLIC LIBRARY

(A Delphi Study)

by

Darlene E. Weingand, Ph.D.

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REFLECTIONS OF TOMORROW:

LIFELONG LEARNING AND THE PUBLIC LIBRARY

The purpose of this study has been to determine potential library involvement in the lifelong learning movement in the State of Minnesota. This final chapter will review the methodology and the process, explain the taxonomy of findings, state conclusions, and present recommendations.

Methodology

This study has focused on the question of whether the public library can or will be one of the non-formal providers of lifelong learning in Minnesota, and has used the Delphi method to discover in what way the public library, as perceived by various publics could become an active participant in this dimension of the educational process.

The Delphi method was pioneered in 1953 by Norman Dalkey and Olaf Helmer at RAND Corporation. Their research into consensus through the use of expert opinion developed into the Delphi process, which is noted by: 1) anonymity; 2) iteration and controlled feedback; and 3) statistical group response. However, the Delphi Method has a different research epistemology than standard survey techniques, and focuses on the generating and gathering of cultural information in a mode similar to a conference by mail. In the Delphi technique, problem-solving is approached through application of group intuitive expertise. Panelists are

required to respond individually and anonymously to several administrations of the same questionnaire statements. Between these rounds, statistical feedback concerning both individual and group response is provided to each panelist. Opportunity to change responses is present throughout the process.

In this study, Delphi was used to suggest what changes would take place before the year 2000 in both society and the public library, and in what specific time period. Other considerations were the likelihood, impact, importance, and desirability of each change. Finally, panel confidence in these forecasts was assessed, and groups that would promote and hinder each change were identified.

Process

Five interest groups were identified as having a potential impact on the lifelong learning component of public library futures. These groups were information systems specialists, adult educators, representatives of funding sources, library users, and library practitioners. Criteria for selection included professional affiliation, professional association involvement, geographical distribution, job description, and policy-making capability. An initial panel of 50 persons, representing the five interest groups, entered into the Delphi experience.

Round O, an open-ended questionnaire, asked the panel to respond with change statements reflecting four social issues categories and four library-specific categories. A

ninth category was allowed for statements unsuited to other categories.

The responses received from Round O were synthesized into the change statements which formed Round I. Four questions were asked concerning each change statement: likelihood/probability; panelist confidence concerning personal judgment; dates of both prototype and general occurrence; and desirability.

In processing Round I and preparing Round II, the median and inter-quartile range were computed from the Round I responses and marked on photocopies of Round I for return to the panel, along with a compilation of panelists' comments. Panelist suggestions concerning splitting statements and adding headings were considered and implemented. Two additional questions were added in Round II: importance to libraries and lifelong learning, and impact. Where a panelist's responses for Round I fell outside the inter-quartile range, notation was made in red on the photocopy included in Round II, and rationale for those positions was requested.

In round III, the Round II responses were processed in similar fashion to Round I. In addition, the median and inter-quartile range were recomputed for Questions 1-4 to reflect changes of opinion, and this revised feedback was marked on each panelist's photocopy. Only one additional question was added in Round III: Which one (of the listed constituency groups) will most promote and which one will most hinder? When Round III was returned to the panel, several enclosures were appended: The "Minority Report" representing the rationale of those panelists holding positions outside the

inter-quartile range; optional comments; an evaluation form; a brief demographics questionnaire; and an invitation to a one day wrap-up conference.

Findings

The change statements were divided into six major groups each having two to four subdivisions. The major groups included: Social and Economic Change, Work and Leisure, Technological Advances, Information-Based Society, Education, and Governance/Funding. (A "Summary Scenario" of all groups is appended.) Findings for each subdivision were reported in four sections: 1) tabular presentation of all date in percent; 2) a narrative description of high probability/high impact events; 3) a scenario depicting a possible future, based on the panel's ratings; and 4) a discussion of implications for public libraries.

Conclusions

This study was designed to secure information concerning lifelong learning and public library futures in the State of Minnesota. The utilization of the Delphi technique as the methodology in the study and the findings of the study led to the following conclusions:

1) The Delphi panel perceives a rapidly changing society with pluralism and choice as the key concepts for the next twenty years.

2) The panel has enumerated a variety of ways in which public libraries can become effective in the lifelong learning enterprise. These avenues represent both dynamic and support

systems, and would involve changes in administration, library education, collections, and library operations.

3) The projected time lines indicate a five to ten year lag between societal change and library response.

4) A significant percentage of the panel has declared uncertainty on major concepts of the library's: a) response to citizen needs; b) implementation of technology; c) internal perception of the educational role; and d) response to change. This implies that libraries will change only under pressure and will probably not realize the dynamic, risk-taking leadership potential.

5) Cooperation among providers of education is essential in this world of diminishing resources. Duplication of service is a luxury which can no longer be afforded.

6) The pedagogical effect of the Delphi experience on panelists has been impressive and beyond expectations. Both written and verbal feedback from panel members have emphasized several results: a) heightened personal awareness of issues; b) clarification of facts and attitudes; c) a resolve to participate professionally in involving (and cooperating with) libraries in the lifelong learning movement; d) an appreciation of personal lifelong learning efforts, both actual and potential; and 3) an excitement concerning interaction with peers over issues of importance and interest.

Recommendations

The recommendations based on the conclusions and findings of this study are presented in two sections: 1) those

relating to practical application of the study findings; and 2) those relating to future studies.

Recommendations for Practical Application of Study Findings

1) The library must view its mission as a partner with other institutions in the lifelong learning enterprise and provide materials and services with that goal in mind.

2) Libraries will need to provide varied and sufficient materials so that self-directed learning is not only feasible, but facilitated.

3) Libraries should cooperate with other providers of education in order to effect maximum lifelong learning opportunities.

4) Libraries should actively market their services and seek out grants for innovative lifelong learning programs.

5) Libraries should employ community analysis in order to provide appropriate services and to demonstrate community needs and citizen interest to both funding authorities and library workers.

6) The development of citizen coping skills should be part of library programming and community problem-solving activities.

7) Urban libraries will have to meet the increased expectations of an expanded clientele as the population shifts to urban areas; users will be interested in hard information and educational materials.

8) Libraries should alter hours to coincide with the leisure patterns of the working public.

9) Outreach activities and attention to needs of all interest groups should be a high priority for libraries.

10) Libraries should be electronic interfaces with such communications devices as computers, telephone, and cable TV--in an interactive mode.

11) Libraries need to be in continual contact with purveyors of delivery systems, such as communications satellites and cable TV.

12) Libraries should provide audiovisual hardware, including computer terminals, so that the entire citizen population has equal access to these modes of information retrieval.

13) Libraries should prepare in the 1980s for the emergence of digital publishing.

14) Libraries should be increasingly alert to the possibilities of pre-censorship and stive to present balanced points of view.

15) Library collections will need to reflect the rapidly growing absorption with the world of energy alternatives and environment preservation.

16) Library educators need to monitor social trends as they develop in order to offer courses and degrees that are both effective and appropriate for a changing profession.

17) Librarians will need to be trained in creative problem-solving, counseling, mentoring, communications technology, human relations, research and statistical skills, and community analysis.

18) Library administrations need to routinely examine

alternative futures and include these projections in a regular long range planning process.

19) Library administrations should apply business management techniques to library operations, while keeping flexibility of service and library effectiveness as top priorities.

20) Library administrations should plan buildings and service patterns which use energy with maximum efficiency.

21) Library administrations need to examine job descriptions and seek ways to provide challenging tasks for library workers.

22) Library administrators should establish and encourage continuing education experiences for all levels of staff.

23) Library staffs should be encouraged to interact with professionals from other agencies in order to reduce intra-institutional insularity and increase creative idea exchange.

24) Libraries must come to the realization that complacency and apathy are the enemy--not low budgets.

Recommendations for Future Studies

Delphi studies can be managed on either the large scale or the smaller, personal contact level. Panel feedback in this study would indicate that a high degree of satisfaction can be achieved through the personal contact method. This very real result should be considered as a study is planned.

In either mode, full computerization would greatly ease the burden of the researcher. Such electronic management, however, would be expensive. Creation of standardized software for small, medium and large scale studies would be a

worthy goal. In addition, it should be noted that this study was limited in its reportage to aggregate results. Analysis of subgroups would be possible.

Although this study concentrated on public libraries and lifelong learning in the State of Minnesota, both the issues and scope of the panel are broad enough to make generalization possible. Conducting studies in other states for comparative purposes would prove very useful.

The importance of this replication cannot be overstated. The findings of this study have profound implications for the future of public libraries in Minnesota, with particular application to the lifelong learning society. However, public libraries are a national resource and further Delphi studies should be initiated in order to fully explore these implications on the national level. Public libraries have historically followed social change, but at a conservative distance. Yet, the rate of change has now accelerated to the point that such a leisurely course can no longer be tolerated. If public libraries are to interact in the lifelong learning process in a significant way and expand other aspects of service to meet tomorrow's challenge, then methods of examining alternative futures and planning for change must become standard policy. Additional Delphi studies can support the need for these modifications in the public library world.

SUMMARY SCENARIO

Diversity and choice are key concepts in United States' culture as the Twentieth Century enters its final stages. This sense of pluralism, once the bedrock of the American heritage, now rises to claim its birthright and to multiply options until the human mind has difficulty in coping. By experimenting with life and discounting cultural programming, many individuals will ride change and not be immobilized.

The following scenario consists of six parts: social and economic change, work and leisure, technological advances, information based society, education, and governarce/funding.

Social and Economic Change

Increase pluralism and specialized lifestyles will play a major part in the next two decades. By 1990, the role of women will have expanded into visible positions in industry, education and politics, and it is somewhat likely that before the turn of the century that sex, class, and race characteristics will begin to dissovle in an extended period of social and economic instability. As traditional roles decline, other options will surface: two-career families, reduced family size, sharing of roles among couples, single parent families, couples with jobs in two cities, and back-to-earth/simplified living.

Widespread demands for preservation and restoration of the environment will be aided by Congress. As a hedge against

diminishing resources that are in common use, technologists will cooperate with an increasing interest in space and in marine life throughout the next two decades.

Although a general sense of global consciousness is developing and should peak around 1990, it is likely that disenfranchised groups will continue to turn to terrorism to gain their objectives. Competition for energy and environmental resources will probably result in conflict between "haves" and "have-nots" by 1990. Problems attendant to these issues will increase markedly, prompting the need for an expanded information base and retrenchment of living styles.

Population will shift back to urban centers and cooperative living will be in vogue in areas of housing, transportation, food, and education. Although the housing market will reflect more use of large scale, multiple dwellings, a sense of localism and neighborhood involvement will alleviate tendencies toward isolation. More risk-taking attitudes will emerge as individuals and institutions attempt to respond creatively to tightening conditions, and energy consumption per capita will decrease after 1985.

Self-improvement will be a major focus, with an increasing interest in interpersonal skills, consumer information, human resources and development, genealogy, wholistic issues, support groups, resourcefulness, and psychic communication. With all these areas of human development emerging, many librarians will be trained and proficient in creative problem-solving in order to be of assistance to library users.

Moreover, special groups will pose a challenge to the

library world. As influence is exerted by various groups to have their learning needs satisfied, libraries will use community analysis as a tool to attempt to meet those needs. However, grant funding will need to be secured before 1990 to augment declining library resources, if any progress is to be made. "Mainstreaming" individuals into the general population, an activity which is in process and should peak in the 1990s, will generate additional needs for adaptive learning situations. Increase in special education research, numbers of self-directed learners, acceptance of population control, and lengthening of the retirmenet years will advance this need.

Librarians, in order to interact effectively with all special publics, will have graduate coursework in the needs of these publics and services to meet these needs. Additional training will include human relations skills, research and statistical analysis, and community analysis. Community analysis will become a critical, but accepted, library activity by 2000, and should prove to be one effective way to monitor the tides of change.

Work and Leisure

Major work and leisure changes will occur in the next twenty years. More service-oriented industries will appear throughout the period and lower productivity and higher real cost of many goods and most services will be a problem by 1985. Direct credit/debit transactions will gradually eliminate the necessity for personal handling of money.

Flexibility and multiple options in the structure and ethics of work will appear by 1995. People will vary their working years by experimenting with miltiple careers, shared jobs, sabbaticals, and non-work-related life experiences. The quality of work will also be affected as workers seek positions that are more self-actualizing, meaningful and satisfying. However, development of a general hedonistic attitude is only moderately likely.

By the year 2000, training and continuing education will play an increasing role as more occupations, augmented by a trend toward public accountability, will require mandatory continuing education for licensure, re-certification and staff development. Occupational obsolescence will be a definite area of concern by 1990.

In addition, corporate responsibility will increase by 1990, especially in terms of in-house provision of training and lifelong learning, and expanded health, welfare and pension plans. These benefits, in addition to a decrease in the number of hours worked each week, will be primarily promoted by labor unions, even though the degree of power of unions appears to be both in doubt and of questionable desirability.

In library education, there are several major areas of uncertainty: 1) whether job experience and/or educational attainment will be criteria for certification; 2) whether paraprofessional programs will be established in colleges and universities; and 3) whether curriculum at the master's level will be expanded to two years in order to provide field

work and diverse course offerings. In addition, although many librarians will be trained and proficient in a non-library field, there is doubt whether these professionals will be hired in a non-library job. However, improved testing measures in motivation and creativity should be pioneered by 1985 and in general use by 1990, and should aid in resolving a portion of this uncertainty.

Technological Advances

Many new technologies will emerge in the last two decades of this century. Although prototypes of most forms are now in developmental stages, it will not be until the 1990s that such forms as home videorecorders, home computers, videodiscs, language interpretation computers, optical fiber high bandwidth transmission, and biofeedback computers become generally used. Just before 2000, low-cost mass memories, holographic movies, teleprojection, and low-cost large solar cells will enter the mass market. Other forms, such as compressed speech playback and ultrashort radio waves, will develop over a period of years. Micro miniaturized "systems on a chip" circuitry should be fairly widespread before 1990.

The effects of the new tecnnologies will make profound changes in society before 2000. The use of communications satellites in the public interest and application of the computer to literacy problems, molecular medicine and digital publishing will amplify communications possibilities and, in larger measure, the quality of life. Those with physical disabilities will be greatly assisted: audiovisual aids and

chemotherapy for the mentally retarded; direct stimulation of sensory nerves to help the deaf; computer translation from print to synthetic speech for the visually impaired; and cassette braille machines to assist the blind.

In addition, throughout the next twenty years, advancement will be made in the development of non-food products to help extend the world's diminishing resources. By 1995, home usage of microfiche will be fairly common (reducing the drain on wood products). Space travel and colonization will be in a prototype phase. However, routine space travel will not occur until the 21st century.

Information-Based Society

Effects of the information-based society will be felt by both individuals and institutions. Although the volume of information will increase markedly by 2000, the organization of that data will respond to an awareness of individual cognitive styles. Much of this data will be fragmented into in-depth subjects, and more people will be interested in these smaller units of information. Pre-censorship, however, is a danger and will be governed primarily by the business world. In terms of economics, the cost of information will decrease as productivity rises.

Interactive modes of communication will be the focus of the next two decades. Computer conferencing and telecommuting will be new avenues of interaction; elimination of the need to be physically at work will also eliminate much of the need for travel and reduce the drain on already diminishing resources.

This interaction will extend beyond the business setting, into educational settings; librarians will therefore be trained in communications skills and technology. The rising demand for non-print will peak around 1990 and be fueled by the media sophistication fostered during years of schooling. The widespread use of computers as interactive devices will concern educators and psychologists, who will fear such effects as intimidation, dehumanization and loss of social interaction.

More specifically, this advent of electronic delivery systems will fundamentally alter libraries before the turn of the century. Major changes will include provision of computer terminals and audiovisual equipment in the library, and software for home computers and video. This software will be available either in the library or via telecommunications lines to the home, where computer and cable TV systems will be commonplace in the 1990s. Both large and micro high-capacity digital devices will be available for the storage and retrieval of large amounts of information, with the large centralized mode more frequently utilized. Although access to the holdings of all Minnesota libraries will be possible in the 1990s, it is uncertain as to whether a common data base or circulation system will be in use. As libraries attempt to adapt within this electronic revolution, several modifications of operations are likely to occur: restructuring of architecture to accommodate electronic delivery systems; some decentralization into convenient neighborhood

locations, such as supermarkets, airports, gas stations; and extension of library hours.

Therefore, the library will become an electronic entity . . . probably against its will, and definitely at least one full decade behind peak demand. This lack of long range planning will require charging for data banks and learning materials because budgets were not constructed with these services as priority items.

Education

Rapid societal change will make the possession of crisis avoidance and coping skills more critical to human existence. As education becomes acknowledged as a survival tactic, the general level of education will creep upward and competency-based education may become more accepted in the 1990s. Continuing education will outgrow the restrictive definitions of remedial and preparatory activity, becoming an integral part of the quality of life.

Post-secondary education will be in a fluid state in the next twenty years: enrollments will continue to decline; costs will be high; many students will drop in and out of school; dissatisfaction will mount; and more individuals will seek out vocational training. In an effort to respond to these circumstances, educational institutions will offer weekend and evening classes, market to age groups beyond the 18-22 year old range, use staff and buildings more creatively, and attempt to extend services beyond traditional campuses. The State legislature will disapprove of many of these

innovative attempts; it may prove necessary to disprove charges of duplication of service by presenting evidence of cooperation with other education providers. Yet, competition and cooperation among providers of education will become more intense as the value of education becomes more evident to learners.

As the library's image and goals are redefined to reflect a role as a provider of lifelong learning, cooperation with other education providers will increase. As brokers, public libraries will serve the function of clearinghouse for community educational, cultural, and informational needs. Although a more remote possibility, educators may have office hours in libraries beginning in 1985, and thereby extend their expertise into the larger community. Another area of cooperation may feature library and industry joint efforts involving test-marketing of educational products.

As an educational institution, the library will provide a roster of services designed to stimulate and facilitate learning: symposia, self-directed learning packaged programs, advising/counseling services, basic education, classes, and facilities for tutoring. As such, the library will become an important access point for education and information. This emphasis on adult learning will place public libraries directly in the lifelong learning mainstream by 1995.

In order to competently serve these adult learners, librarians will be trained in adult education principles, the role of learning consultant, and counseling procedures.

However, they will concentrate on these skills plus information access, and cooperate with experts concerning subject knowledge.

In terms of competition, argument over "turfs" will predominate among education providers, and a major area of conflict will be the community education market. But as public schools cut services to children in after-school hours because of declining enrollments, libraries will attempt to lure these children into library-sponsored events, emphasizing "cradle-to-grave" lifelong learning.

Governance/Funding

Centralization of governance will be strongly affected by a State commitment to various concepts: computer learning packages, computer consortia, community education and lifelong learning, and the leisure-oriented society. Although government regulation will continue to influence the social structure, citizens will expect more visionary leadership from their elected officials; this attitude will be widespread by 1990. There is uncertainty, however, as to whether authority and budgeting will tend to be controlled by the largest governmental unit in an area, including consolidated library boards. It is unlikely that public libraries will be centrally funded by the State to the extent that local control is significantly diminished.

Increasing citizen involvement in public library affairs will reinforce local control, yet it will also augment communication across traditional boundaries. Although local

autonomy and staff inertia may dampen formation of official networks, reciprocal borrowing will increase through the 1990s, with rate reimbursement as an incentive.

Cooperation between libraries and other public agencies will be strongly fostered by such financial constraints and enticements, and ultimately mandated by government. Once this political environment is accepted, the political boundaries between library districts will be less significant. As a result, librarians will interact increasingly with volunteers and specialists from other agencies and will receive training in managing paraprofessional specialists. Since interagency cooperation is a form of public relations, library schools will begin offering courses in that area no later than 1985, but librarian proficiency in this skill may take as long as 1995 to be widespread.

Although the economic future for libraries is not bright, there remains uncertainty as to the ultimate effects of inflation and fiscal restraints. The emerging trend toward senior library administrators who are trained as business managers will prove fortuitous, and application of management information systems will result in more cost effective service.

Epilogue

Change is at once simple and complex, personal and societal, fundamental and technical, acute and chronic. Change may be the only reality. To function effectively within the cultural milieu, people and institutions will need to learn to move flexibly with change, plan in terms of alternative

futures, and be willing to risk in order to carry the legacy of yesterday and today into tomorrow.